



APEX 2020

DRAFT Technical Specifications

High-level goals and schedule

November 2nd 2015

APEX



U.S. DEPARTMENT OF
ENERGY

Office of
Science



Sandia
National
Laboratories



General points

- General information
 - APEX's focus remains application and workflow performance
- Time frame for Crossroads/NERSC-9
 - Contracts for the system build and NRE are anticipated to be complete Q4CY16.
 - NRE activities will start immediately after contract signing and will be aligned between systems.
 - Two contracts per system (a build and an NRE contract)
 - To meet the mission needs, we need to have a system delivered by Q2CY20.
 - Acceptance is anticipated by Q1CY21.
- Advanced Technology Systems
 - Demonstration and development of Exascale-era technologies
 - Balanced mix of pursuing advanced technologies with mission needs
 - Manage the risks of advanced technology solutions through:
 - Technology evaluation checkpoints
 - APEX requires frequent and open communications with the vendor (including system partners) in order to understand and adjust to potential schedule or technology changes.
- NRE
 - Our expectations for NRE are “to guide and improve system performance and productivity”
 - We prefer to specify high-level guidelines of areas where we think NRE will help, not present specific solutions we want see pursued.
 - NRE can be used to accelerate technologies proposed
 - NRE can help develop an advanced technology that both benefits the APEX-2020 systems AND goes beyond the life of those systems
 - See the draft APEX 2020 technical specification for examples

APEX 2020 Schedule

- November 2, 2015
 - Draft technical specifications released
- November 2015
 - Workflows released
 - Benchmarks released
- December 11, 2015
 - Draft technical specs formal feedback from vendors due. Feedback will be requested upon the clarity of the draft and the realism of the stated targets. (Note: informal discussion and feedback is encouraged all the way up to the formal RFP release.)
- Q2CY16
 - RFP released – responses due 30 days later
- Q4CY16
 - Subcontracts (NRE/Build) awarded
 - Start NRE activities
- Q2CY20
 - System delivery and build complete
- Q1CY21 Acceptance Completed